

Aero Design Ltd.

Work Order Control Sheet

Work Order#: 2015-40 Date Opened: 01-May-15 Title: Fabrication

Aircraft OEM: Eurocopter Aircraft Model: AS350/355 Product Type: Lid Product Model: Long Quantity: 1

Work Order Contents

Work Order/Build Sheets (Procedures Provided)
Additional Work Sheets (Standard Practice)
Drawings (See List Below)
Parts Distribution Sheet
Sub Component Tags
Completed Certification (Original)
Time Sheet (R&D)
Notes

Initial or N/A

JR
N/A
JR
JR
N/A
N/A
N/A
N/A

Build Sheet Contents

Tasks Initialled
Dual Inspections Initialled

Initial or N/A

JR
JR

Drawing List

Drawing #	Rev #	Description	Initial or N/A
78412	2	Lid Assembly	JR
70405	4	Lid Step Modification	JR

Component Completion

Quantity Complete on This Work Order
Quantity Incomplete on This Work Order
Further Processing Required Before Release
Release to Stock as Components

As Instructed

1
N/A
N/A
JR

Certification

Form One Completed
Serviceable (Green) Tag Completed
In Process (Yellow) Tag Completed
Unserviceable (Red) Tag Completed
Parts Tracking (White) Tag Completed
Parts Placed in Stores for Distribution

Initial or N/A

N/A
N/A
N/A
N/A
JR
N/A

Additional Documentation

Documentation of a minor change
Non-Conformance Report Required
Service Difficulty Report Required

Initial or N/A

N/A
N/A
N/A

Billing

Local (Aero Design)
Research and Development
Third Party

Initial or N/A

JR
N/A
NA

Traveller

Initial or N/A

Work performed by:

Print: J Rekve for M Rekve

Sign:

ICC / Dual Inspection performed by:

Print: Jason Rekve

Sign:

Work Order closed by:

Print: Jason Rekve

Sign:

SCA: AD01

Date: 13-May-15

SCA: AD01

Date: 13-May-15

SCA: AD01

Date: 13-May-15

Approved Manufacturing Facility 73-04

Form 20.D.03

Rev. Original 23 Sep 2014

CARGO BASKET LID FABRICATION - COMMON

General

These instructions apply to all cargo basket lid assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

Bell 206L/407 – Right side only

69812, Revision 3 – Standard Low Mounted Basket; Extra-Wide Low Mounted Basket

94612, Revision 0 – Extra-Wide Low Mounted Ski Basket

76612, Revision 0 – High Mounted Ski Basket

Eurocopter AS350/AS355 – left or right

77612, Revision 1 – Short Basket

69812, Revision 3 – Medium Basket (left and right)

→ 78412, Revision 2 – Long Basket

94012, Revision 0 – Extra Large (ski) Basket

Robinson R44 – left or right

90612, Revision 0 – Standard Basket (left or right)

Bell 206B – right side only

80212, Revision 0 – Short Basket

80312, Revision 0 – Medium Basket

81112, Revision 0 – Long Basket

Bell 429 – right or left

95912, Revision 0 – Standard Basket

Bell Medium – left or right

75112, Revision 0 – Standard Basket

95512, Revision 0 – Extra Large (ski) Basket

MD600

82812, Revision 0 – Standard Basket

Options

→ 70405, Revision 3 – Walkway

70402, Revision 1 – Lid Door

2015-40

AS350 Long Lid
w/ WALKWAY (1)

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

Work Order: 2015-40

Date Open: 1 MAY 2015

1. Rim Assembly – Basket Lid AD06
 - a. Cut and fit $\frac{3}{4}$ " x 0.035 material to fit rim jig, 45 degree ends.
 - i. 1 or 2 lid prop bushing holes in short tube – refer to drawing
 - b. Record material PO on attached material list.
 - c. Remove writing on tubes with acetone and scotch bright.

2. Weld Rim Assembly ~~AD06~~
AD-05
 - a. Record welding rod PO on attached material list.

3. Inspection AD06
 - a. Rim for complete welds

4. Frame assembly – Lid AD06
 - a. General
 - i. Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing)
 - b. Insert rim from step 2 into jig.
 - c. Cut and fit $\frac{3}{4}$ " x 0.035 material, 21" long, for lid cross members.
 - d. Record material PO on attached material list.
 - e. Remove writing on tubes with acetone and scotch bright.
 - f. Drill vent holes into rim to vent cross members into rim.
 - g. Locate cross members in lid rim. Refer to drawing for spacing of cross members. Clamp cross members with C-clamps to jig.

5. Frame assembly – Lid with optional walkway modification AD06
 - a. Fit cross members to rim in accordance with step 4.
 - b. Attach walkway jig with C-clamps. Ensure correct orientation of rim, refer to drawing.
 - c. Cut $\frac{1}{2}$ " x 0.035 material for walkway stringers to fit between lid cross members. Record material PO on attached material list.
 - d. Drill vent holes into cross members at walkway stringers.
 - e. Align walkway stringers on walkway jig using cleco clamps near both ends of each stringer, and clamp stringer to jig using a C-clamp in the centre.

6. Weld frame assembly. AD-05
 - a. Record welding rod PO on attached material list.
 - b. Jigs must remain in place for as long as practical during welding.

7. Inspection AD06
 - a. Frame assembly for complete welds.

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

AD06

8. Mesh assembly.

Note: 95912 (Bell 429) does not have mesh. Skip to step 10.

- a. Pull sheet of expanded mesh from stock. Record material PO on attached material list.
- b. Cut mesh to size for lid.
- c. Remove surface rust with scotch-brite.
- d. Ensure lid is prepared for mesh on the correct side.

9. Weld mesh to frame assembly per drawing.

AD-05

- a. General welding requirements for all lids:
 - i. Every intersection on all edges.
 - ii. First 5 intersections along cross members, then every second intersection.
- b. MIG weld both short sides.
- c. Clamp lid over spacer at centre of lid to pre-tension mesh.
 - i. $\frac{3}{4}$ " for lids under 76"
 - ii. 1" (check) for lids over 76"
- d. Weld remainder of mesh as indicated in a.
- e. Record welding rod PO on attached material list.

10. Weld lid components.

AD-05

- a. Handle brackets, locate in accordance with drawing.
 - i. Standard location: $\frac{1}{4}$ " outside of last cross member on both ends.
 - ii. Record handle bracket WO and welding rod PO on attached material list.
- b. Lid prop bushing(s).
 - i. one or two in accordance with drawing.
 - ii. Record lip prop bushing WO and welding rod PO on attached material list.
- c. Placard bracket. – not installed on 95912 (Bell 429)
 - i. Locate on cross member to set bracket in centre bay of lid.
 - ii. Record placard bracket WO and welding rod PO on attached material list.

11. Clean up

AD06

- a. Grind high spots off mesh welds.
- b. Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out.
- c. Straighten lid using frame attached under welding table. Work carefully, avoid excessive force to prevent kinking rim tubes.
- d. Drill #9 through lid prop bushing(s). De-burr hole(s).
- e. Drill for lid bumpers using $\frac{1}{4}$ " (#3) centre drill.
 - i. 3 places for lids under 76"
 - ii. 4 places for lids over 76"
- f. Remove surface rust with scotch-brite pad.

12. Final Inspection

To be completed by a different person than the previous steps.

CR

- a. Basket lid assembly for complete welds, and required minimum mesh weld locations.
- b. Material lists complete.
- c. Overall condition and conformity to drawing(s).

CARGO BASKET LID FABRICATION

Complete
(initial or SCA#)

OK

13. Powder Coating

- a. Parts are to be powder coated white in accordance with commercial practices.
- b. Record powder coating PO.
- c. Inspect powder coating on receiving.
- d. Tag lid assembly and place into stock in preparation for assembly.

Work Order: 2015-40

Material Tracking Sheet
Eurocopter AS350 / AS355
Long Lid Fabrication

1 of 2

Date Opened: 1 MAY 2015

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
			78412-01	Lid Assembly		
Step 1				<i>Rim Assembly</i>		
	. 2		--	3/4" Tube - Long Rim (93.25")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14099
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14099
Step 2				<i>Weld Rim Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14028
Step 3				<i>Inspection - Rim</i>	None	
Step 4				<i>Frame Assembly</i>		
	. 4		--	3/4" Tube - Cross Member (21")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14099
Step 5		70405		<i>Option: Frame Assembly - with walkway</i>		
	. 8		--	1/2" Tube - walkway	4130 Steel, 1/2" x 0.035 Sqr. Tube	14099
Step 6				<i>Weld Frame Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14028
Step 7				<i>Inspection - Frame Assembly</i>	None	
Step 8				<i>Mesh Assembly</i>		
	. 1		--	Mesh (lid - 92.5" x 22")	3/4-16F Expanded Mild Steel sheet	14012
Step 9				<i>Weld Mesh</i>		
	. A/R		--	Welding Rod	ER70S-6 MIG Wire	14028

Work Order: 2015-40

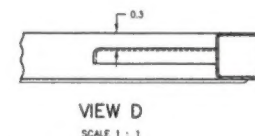
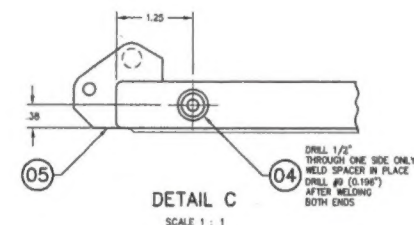
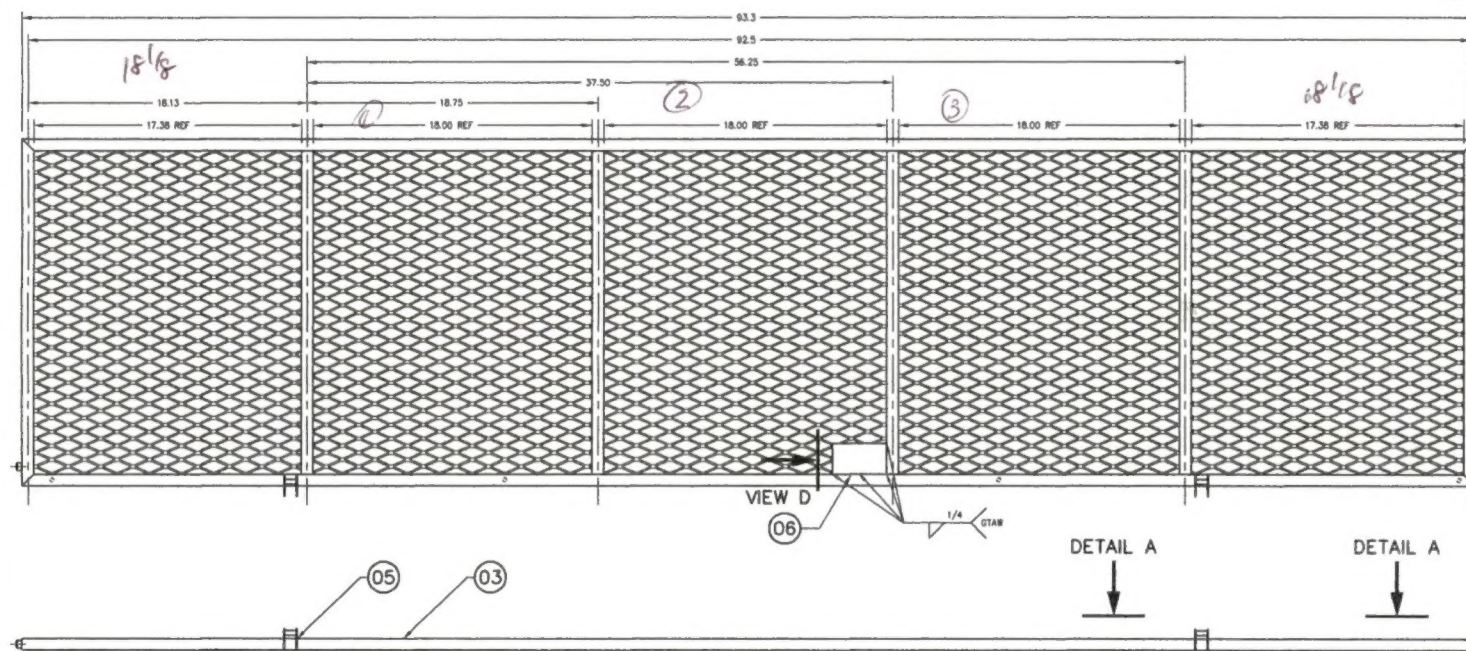
Material Tracking Sheet
Eurocopter AS350 / AS355
Long Lid Fabrication

2 of 2

Date Opened: 1 MAY 2015

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 10				<i>Weld Lid Components</i>		
	. 1	84262	84262-01	Upper Handle Bracket Assembly		
	. . 4		36273-01	Lid Bracket	321 Stainless, 0.050 Sheet	4102 204-38
	. . 2		36275-02	Support	304 Stainless, 5/16" Rod	
	. A/R		--	Welding Rod	ER308L TIG Rod	14028
	. 2		49216-01	Spacer (Lid prop)	304 Stainless, 1/2" Dia.	2015-07
	. A/R		--	Welding Rod	ER308L TIG Rod	14028
	. 1		36204-10	Placard Bracket	1018 Steel, 0.035" Sheet	2014-19
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14028
Step 11				<i>Clean Up</i>		
Step 12				<i>Inspection - Final Assembly</i>		
Step 13				<i>Powder Coating</i>		

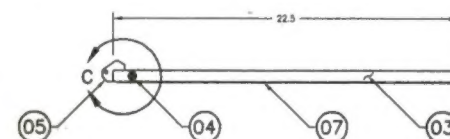
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REV	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	CHANGED HANDLE BRACKETS, REMOVE ALTERNATE LID	BUC	28 JAN 10
2	TITLE BLOCK UPDATED; B4263 CHANGED TO B4265; WELDING ROD UPDATED	BUC	10/07/2014
3	# OF WELDS DOWN BRACE TUBES INCREASED; REFERENCE DIMENSIONS ADDED		
	1/4" HOLES FOR BUMPERS ADDED; VIEW D ADDED		



(01) BASKET LID ASSEMBLY

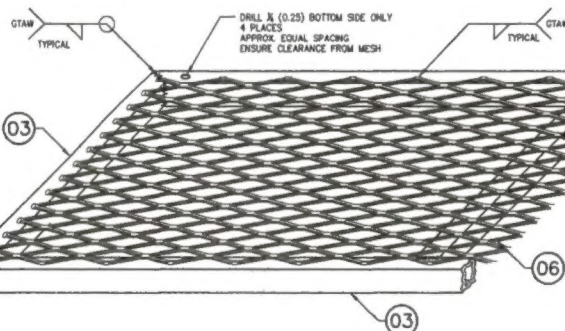
DETAIL B

DETAIL B

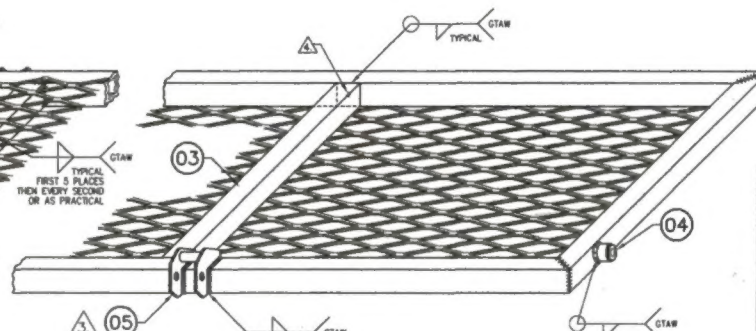


DETAIL A

DETAIL A




DETAIL B
LOOKING AT BOTTOM



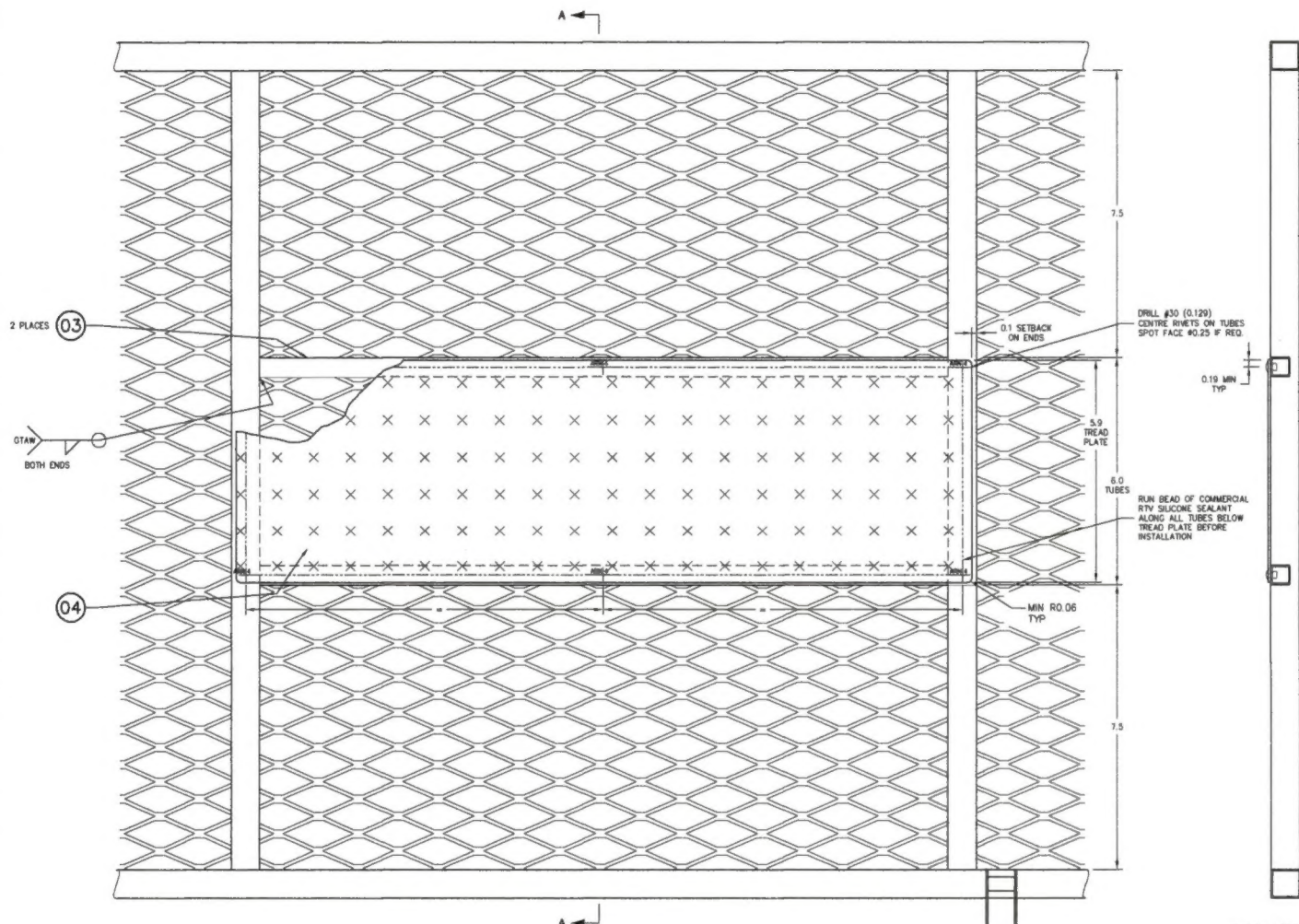
DETAIL A
LOOKING AT TOP

NOTES:

1. REMOVE ALL BURRS AND BREAK SHARP EDGES.
2. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AMS 2685C.
- 4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.
- STAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
- INSTALL ITEM 5 (LID HANDLE PROVISIONS ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING B4263.
- DRILL #30 (0.125) HOLES IN LONG TUBE MEMBERS AT BRACE LOCATIONS TO VENT WELD GASSES. WHEN ASSEMBLY IS COMPLETE, FILL ALL EXPOSED VENT HOLES WITH ROSETTE W/F.D.
5. FINISH: THOROUGHLY CLEAN AND POWDER COAT LID ASSEMBLY.

A/R	3/4-16F 07	MESH			
	36204-10 08	PLACARD BRACKET			
1	B4263-01 05	LID HANDLE PROVISIONS ASSEMBLY			
2	49216-01 04	SPACER			
A/R	-- 03	SQUARE TUBE	4130 STEEL COND N	ML-7-6756	3/4 X 0.035 SQR TUB
	02				
	78412-01 01	BASKET LID ASSEMBLY			
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC
QTY					STOCK SIZE
LIST OF MATERIALS					
APPROVALS			DATE		
DRAWN: R. RATHWELL			19 FEB 08		
CHECKED: E. BURGOIN					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:			 AERO DESIGN LTD. 6088A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 604.680.8378 www.aerodesign.ca		
DECIMALS					
ANGLES					
X.XXX ±0.010					
X.XX ±0.03					
X.X ±0.1					
EUROCOPTER AS350 & AS355 SERIES QUICK RELEASE CARGO BASKET BASKET LID ASSEMBLY (LONG)					
SCALE 1 : 4			DWG SIZE		DWG NO.
SHEET 1 OF 1			A1		78412
					2

THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE, THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREIN.			
REV	DESCRIPTION OF CHANGE	INITIALS	DATE
1	ADD BELL MEDIUM AND EUROCOPTER AS350 BASKETS, CHANGE TUBES	BJC	MAR 19/08
2	ADD EUROCOPTER EC135, MCDONNELL DOUGLAS MD500, BELL 206B BASKETS	BJC	DEC 4/08
3	ADD NEW AS350 AND 206L/407 MODELS	BJC	DEC 4/08
4	TITLE BLOCK UPDATED; MODEL LIST REMOVED; ADD ALT. RIVET; ADD NOTE 7	BJC	28/05/2014



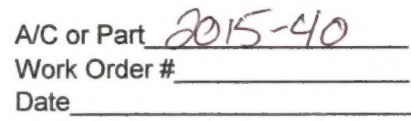
01 BASKET LID ASSEMBLY

SECTION A-A

- NOTES:
1. THIS DRAWING IS AN OPTIONAL CONFIGURATION ADDING A TREAD PLATE STEP TO THE LID. THIS CONFIGURATION MAY BE APPLIED TO ANY OR ALL BAYS OF THE LID. REMAINDER OF LID ASSEMBLY IS TO BE FABRICATED IN ACCORDANCE WITH THE APPLICABLE DRAWINGS.
 2. TUBES (ITEM 03) MUST BE WELDED IN PLACE BEFORE MESH IS WELDED ON BOTTOM.
 3. REMOVE ALL BURRS AND BREAK SHARP EDGES.
 4. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AWS 2685C. WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.
 5. WHEN ASSEMBLY IS COMPLETE, FILL ALL VENT HOLES WITH ROSETTE WELD.
 6. THOROUGHLY CLEAN AND POWDER COAT BASKET SUB-ASSEMBLIES PRIOR TO ASSEMBLY. INSTALL TREAD PLATE AFTER POWDER COATING.
 7. WIDTH AND POSITION OF LID STEP MAY BE ADJUSTED TO MATCH LID DOOR INSTALLED IN ACCORDANCE WITH DRAWING 70402 ON ADJOINING BAY OF THE LID.

A/R	CR3213-4-02	BLIND RIVET	ALTERNATE: HR3213-4-02	
1	70405-04	04 TREAD PLATE	ALUMINUM	COMMERCIAL
2	70405-03	03 TUBE	4130 STEEL COND. N	MIL.-T-8738
1	SEE NOTE 1	02 BASKET LID ASSEMBLY		0.5 X 0.035 WALL TUBE
1	70405-01	01 BASKET LID ASSEMBLY - MODIFIED WITH STEP		
PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC
QTY				STOCK SIZE

BASIC CODE REF. NAS 523 C=COUNTERSUNK D=DIMPLE DIGIT # OF SHEETS TO BE DIMPLED BASIC CODES: BJ=MS20470AD BB=MS20426AD ARN=CR3213 ARM=CR3212		DASH NO. FOR DIAMETER N=NO. HEAD NEAR SIDE F=NO. HEAD FAR SIDE DASH NO. FOR LENGTH + INSTALL NEW RIVET + REMOVE/REPLACE RIVET - EXISTING RIVET		APPROVALS DRAWN: JEFF CLARKE 21 SEPT 2006 CHECKED: E. BURGOIN UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES IN: DECIMALS ANGLES X.XXX ±0.010 ±1/2" X.XX ±0.03 X.X ±0.1		AERO DESIGN LTD. 888A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 604.685.8976 www.aerodesign.ca CARGO BASKET LID STEP MODIFICATION	
SCALE 1 : 1.5 SHEET 1 OF 1		Dwg. SIZE A1		Dwg. NO. 70405		REV. 4	



Approved Manufacturing Facility 73-04 Form 20.F.04 Rev. Original 1 Mar 2013